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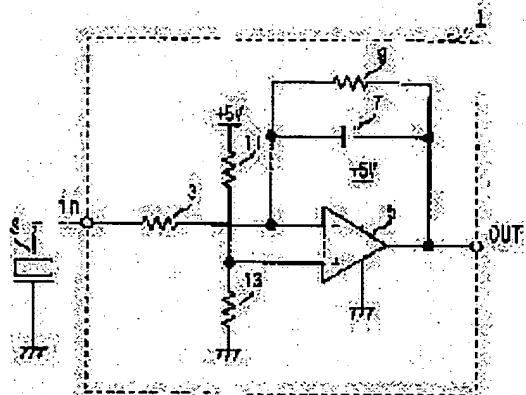
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## (54) CHARGE AMPLIFIER FOR PIEZOELECTRIC PRESSURE SENSOR

### (57) Abstract:

**PROBLEM TO BE SOLVED:** To operate, at a low cost, a charge amplifier for converting electric charge generated in a piezoelectric pressure sensor, with one end grounded, into a voltage signal.

**SOLUTION:** In this charge amplifier 1, a positive-side power input terminal of a operational amplifier 5 is connected to a positive power source (+5 V) while a negative-side power input terminal thereof is grounded, thus powering the operational amplifier 5 by a single power source. Further, an offset voltage lower than the positive source voltage and higher than the ground potential is applied to a non-inverted input terminal of the operational amplifier 5. This makes it possible to convert a change in pressure either on the positive or negative side into a voltage signal centering around the offset voltage even if the operational amplifier 5 is powered only by the single source. That is to say, two power sources are not required and therefore the cost can be suppressed.



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